

**Providing instruction to students with special needs in inclusive classrooms in  
Ghana: Issues and challenges**

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**Abstract**

This study was undertaken to examine the instructional practices of teachers in inclusive classrooms in Ghana. It also assessed the influence of selected teacher background variables on inclusive practices. Thirty-seven (37) teachers from 20 primary schools in two districts completed a background information questionnaire and were observed during instruction in their classrooms. The data were analysed employing descriptive statistics, t-tests and Regression Analysis. The results showed that teachers used fewer instructional adaptations to meet the needs of students with special needs. The teachers' background variable that was most predictive of adaptive instruction was their experience in working with students with disabilities. The implications for meeting the needs of students with special needs through effective inclusive practices in Ghanaian schools are discussed.

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## **Introduction**

Ghana's commitment towards inclusive education was heightened when it became a signatory to the Salamanca declaration in 1994. This commitment followed several previous piece-meal attempts at meeting the varied needs of persons with disabilities, including their access to general education classrooms.

Although there are no accurate statistics on the prevalence of disabilities in Ghana, the National Disability Policy Document (Ministry of Employment and Social Welfare, Federation of Disabled & Ministry of Education, 2000) has suggested (based on estimates from the regions) that the national average is well above 10% of the population. These high estimates of the numbers of persons with a disability, a substantial percentage of whom are children, underscored the need for conscious efforts in pursuing effective measures to provide rehabilitation, education and other services to persons with disabilities. Undoubtedly, the Government of Ghana recognised that if the educational needs of such a substantial percentage of the population were to be met by only special schools, it would require enormous amounts of resources to provide the needed variety of specialists, equipment and space in special education classrooms. It was this recognition that underpinned the Ghanaian Government's drive to ensure that all children (with and without disabilities) attend their local schools through the initiation, in 1992, of the Community-Based Rehabilitation and the Inclusive Education Programs.

The implementation of these two programs, aimed at providing services to many persons with disabilities who were without services in the community, entailed the acceptance of the principles underlying the Primary Health Care Project promoted by the World Health Organisation (WHO). Firstly, that it was more important to bring about small improvements for many than to provide the highest standard of care for a privileged few; and secondly, that non-professionals with limited training could provide crucial services (O'Toole, 1989). With respect to education, the evolving local inclusive school environments, it was envisaged, could provide the needed services to students with disabilities who were not able to enrol in the few special schools.

This development marked a formal and broader attempt at meeting the needs of students with special needs in local community schools in order to address the enormous difficulties faced by many students with special needs who did not have the opportunity to attend the few scattered special schools. The program involved among others, the use of itinerant peripatetic teachers to liaise with classroom teachers to support students with special needs (Kuyini, 1998; Ofori-Addo, 1994; O'Toole, et al., 1996).

Proponents of inclusive education have argued for its implementation on the basis of basic human rights and as a way of providing the same educational experiences for all students (Lipsky & Gartner, 1998; Gresham & MacMillan, 1997; Walker, Ramsey & Gresham, 2004). Inclusion has also been justified on the basis of research, which indicates that it could lead to better academic and social skills for students with special needs (Carlberg & Cavale, 1980; Cole & Meyer, 1991; Freeman & Alkin 2000; Fryxell & Kennedy, 1995; Kennedy, Shulka & Fryxell, 1997; Waldron & McLesky, 1998).

In order to achieve the goals of inclusive education, research has identified several key variables that could enhance or impede the success of inclusion. Among the many factors

shown to influence the success of providing effective inclusion for students with special needs has been the use of appropriate instructional strategies/ adaptations.

Friend and Bursuck (1996, 2002), Mastropieri and Scruggs (2000), OECD (1995), Salend (2001) and Tomlinson (1995) have emphasised the role of instructional adaptation in inclusive settings as an indispensable means for accommodating the needs of students with disabilities. Making instructional adaptations require teachers to implement alternative teaching strategies such as modifying instructional materials, assignments, testing procedures, grading criteria, and varying presentation styles in order to enhance the success of students with disabilities in general classroom environment (Dunlap, Kern-Dunlap, Clark & Robbins, 1991; Jolivet, Wehby, Canale, & Massey, 2001; Scott, Vitale & Matsen, 1998; Schukla-Mehta & Albin, 2003).

In spite of the significant role of instruction to implement effective inclusion, there is concern that individual needs of students with disabilities will be curtailed in the process of trying to cater for the diversity of needs in regular education classrooms (Westwood & Graham, 2003). Further, many regular-school teachers have often demonstrated considerable lack of knowledge about students with disabilities and inclusion (Schumm & Vaughn, 1995; Tomlinson, et al., 1997), and teachers have often used more undifferentiated large-group instruction with few adaptations to meet the needs of included students (Baker & Zigmond, 1990; Schumm, et al., 1995). Consistent with this, Mushoriwa, (2001) concluded that the use of such generic teaching practices resulted in mainstream teachers in Zimbabwe being unable to cater for the individual needs of students with disabilities.

Earlier reports on Ghana's inclusive education initiative raised several concerns, including limited teacher knowledge and skills to provide instructional adaptations towards meeting the need of included students (Kuyini, 1998; Ofori-Addo, et al., 1999; & O'Toole, et al., 1996).

In an attempt to enhance the knowledge and skills of teachers for the inclusive education initiative, the Ministry of Education provided a series of training opportunities/workshops involving the use of The UNESCO Teachers' Resource Pack (RP) on Special Needs in the Classroom for principals, teachers and educational administrators.

The Ministry of Education also adopted a 'train-the-trainer approach' whereby teachers who received the initial training were required to train other teachers in inclusive education approaches. This was followed by the implementations of The Pilot Action Research Project in November 1994, which led to the incorporation of the content of the special needs methodology advocated by the Resource Pack into the curriculum of teacher training, beginning in 1995 (Ofori-Addo, et al., 1999). A resource team of eight peripatetic teachers was also set up to provide subsequent training for peripatetic teachers and new teachers in the districts implementing inclusive education (Ofori-Addo, et al., 1999).

In spite of these provisions, Kuyini, (2004) and Kuyini and Desai (2006) reported that some Ghanaian principals and teachers possessed limited knowledge of the requirements

of inclusion and that such educators were unlikely to have any reasonable capacity to provide appropriate instruction. This conclusion reflected the earlier finding of Ofori-Addo, et al. (1999), who reported that Ghanaian schools implementing inclusive education showed a lack of skills needed for tailoring instruction to the needs of students with disabilities.

### **Aims of the Study**

This study (which was part of a larger investigation) was designed to examine the instructional practices of teachers in inclusive classrooms in Ghana. It was also designed to assess the influence of selected teacher background variables on inclusive practices.

### *Research Question and Hypothesis*

#### Research Question:

What teaching practices congruent with effective teaching in inclusive classrooms do teachers display?

#### Specific Research Hypothesis:

Teachers will differ in their performance of teaching behaviours associated with effective teaching in inclusive classrooms as a function of year of completing initial teacher-training, training in special education / inclusion, and experience working with students with disabilities.

## Method

Data was gathered from a sample of 37 teachers in 20 primary schools in two districts.

Multi-stage cluster sampling procedures were employed to select 2 districts from two designated zones (North and South) and 20 schools from the two selected districts.

The study involved the administration of a survey questionnaire, which was to collect background information from teachers and a classroom observation checklist, which contained items describing effective teaching practices. The instruments were called Background Information Questionnaire and The Effective Teaching Practices Checklist (ETPC).

### *Background Information Questionnaire*

Teachers were requested to provide information related to the following aspects: their gender, class level taught, number of students in their classrooms, number of students with disabilities in their classrooms, year of completing initial teacher training, training in special education / inclusion, and experience working with students with disabilities.

### *The Effective Teaching Practices Checklist (ETPC)*

The Effective Teaching Practices Checklist embodied a collection of teaching behaviours identified in the literature as practices that result in better student participation and learning in inclusive classrooms. According to Mitchell and the Centre for School Education & Research (CSER) (2000), the notion of effective teaching is premised on the assumption that certain teaching behaviours are more likely than others to lead to certain desired students outcomes, and has been shown to exert positive effect on student achievement (Mastropieri & Scruggs, 2000).

In developing the checklist, the works of Englert, Tarrant and Mariage (1992), Mastropieri and Scruggs (2000), Mitchell and CSER (2000), Salend (2001), and Stanovich and Jordan (1998) were reviewed. Further, The UNESCO Resource Pack (1993), which promotes an interventionist or organisational paradigm philosophy of special needs education (Ainscow, 1994, 1999; Clark, et al., 1995; Lipsky & Gartner, 1998), was also reviewed.

A Ghanaian panel of experts reviewed the initial draft checklist of 31 items. The panel consisted of 1 university lecturer in special needs education, 3 peripatetic / special education teachers, 1 regular classrooms teacher, 1 social welfare officer, and 3 officers from the regional and head offices of the Special Education Division of the Ghana Education Service (the professional and implementing wing of the Ghana Ministry of Education).

The panel was required to examine the checklist with a view to identifying items that were appropriate to the teaching-learning situation in Ghana, and to ascertain whether these behaviours/practices were possible to observe and measure in classroom

observation sessions. The panel was also required to make recommendations for any changes and to suggest the addition of other teaching behaviours/practices.

Their recommendations resulted in some items being deleted from the list. A total of 29 items was retained. The 29-item checklist was then pilot-tested in 8 classrooms and a decision was made to delete one more item from the list.

The final 28-item checklist included 10 items related to Class Management, 11 items related to Lesson Planning /Presentation, and 7 items related to Adaptive Instruction. The items were scored on the bases of three classifications: " Fully in Evidence " (scored as 3), "Partly in Evidence" (scored as 2), and "Not in Evidence" (scored as 1). The items of the checklist were worded in the following fashion:

Maintains students' attention during instruction: E.g. Speaks when it is quiet or uses pauses in talk to get students to focus on teacher

1            2            3

Ensures clarity in presentation: E.g. Uses clear and direct language, provides concrete examples of information and concepts, breaks lesson into segments

1            2            3

Uses additional instructional techniques recommended for inclusive classrooms: E.g. Cooperative learning and Peer-Tutoring formats

1            2            3

Reliability analysis was conducted for the three subscales of Class Management practices, Lesson Planning/Presentation practices, and Adaptive Instruction practices. The results showed Cronbach's Alpha values of 0.64 for the Class Management practices subscale, 0.62 for the Lesson Planning/Presentation practices subscale and 0.78 for the Adaptive Instruction practices subscale.

#### *Data Collection*

All respondents were required to complete the Personal and Background Information Questionnaire.

Within each school, two teachers were randomly selected for observation of their classroom teaching sessions. The observed teachers in each school were selected only from lists of teachers of classes in which students with disabilities were included. Two observers undertook the observation of each of the classroom sessions. A total of 37 teachers were observed in the 20 schools.

Meetings were held prior to the sessions to work through the checklist and to discuss what constituted the behaviours on each item and what constituted an agreement between observers. Agreement was defined as giving exactly the same score on an item on the checklist. Each classroom teacher was observed continuously over 3 teaching sessions of 40 minutes each or a total observation time of about 2 hours. Observers made notes during the observation sessions and could also check off the different behaviours.

Immediately after the observation period, observers used their notes to rate independently all of the effective teaching behaviours to enable them to come to a mutual agreement on their ratings. The percentage agreement across the items was calculated for the two observers for each teacher, resulting in a percentage agreement for each teacher. Pearson Product Moment correlation coefficients were calculated for the pair of ratings for each teacher. Inter-rater reliability checks for all teachers showed that the mean percentage agreement across the total of 37 teachers observed in the 20 schools was 0.94.

### *Data Analysis*

The data analysis to answer the main research question and determine the research hypotheses involved the use of descriptive statistics, t-tests and Regression Analysis. The means and standard deviations for the scores on each of the items of the ETPC were computed and t-tests employed to examine the relationship between background variables and performance of effective teaching practices. Stepwise Regression Analysis was used to determine which of the teachers' background variables was most predictive adaptive of instruction.

### **Results**

The descriptive results showed that fifty-four percent (54%) of the teachers were female and forty-six percent (46 %) were male. About forty-seven percent (47%) of the teachers completed initial teacher training prior to 1995 when inclusive education was introduced into the teacher-training curriculum. The rest of the teachers (53 %) completed training after 1995. About twenty-nine percent (29 %) of the teachers were teaching in classrooms of between 1 and 30 students and seventy-one percent (71 %) were teaching in classrooms of more than 31. This indicates that the majority of the classrooms included in this study were very large, accommodating more than 30 students each. The data also showed that the majority (53%) of the classrooms included students with disabilities. More importantly, the majority of the teachers (58%) did not have any training in special education/inclusion, while forty-six percent (46%) of the teachers claimed to have experience working with students with disabilities.

### *Teachers' Performance of Teaching Practices Congruent with Effective Instruction in Inclusive Classrooms*

The observational data in relation to the research question about teachers' performance of teaching practices congruent with effective teaching in inclusive classrooms showed that while some teaching practices/behaviours were consistently demonstrated, other practices were irregularly employed by teachers in the inclusive classrooms.

Teaching practices such as Working on Same Curriculum (item 22), Response to Rule Non-compliance (item 5), Reinforcement Use (item 8), Presentation Clarity (item 13), Involving Students with Disabilities in Class Activities (item 27), Knowledge Review (item 11), and Providing Independent Practice Activities (item 16) were consistently performed by teachers.

Teaching practices rarely demonstrated by teachers, included practices within the Adaptive teaching practices sub-scale, such as Providing individual and group instruction, Modifying evaluation procedures, Use of Peer-tutoring and Cooperative Learning Formats, Adapting Instructional & Curriculum Materials, Use of multi-level Teaching and the Use of I.E.Ps.

In general, teachers were using more consistently, the teaching behaviours/practices associated with class management and lesson presentation. However, the majority of teaching practices on the adaptive instruction subscale including peer tutoring and cooperative learning strategies were used less consistently.

#### *Relationship between Teachers' Background Variables and Adaptive Instruction*

The Stepwise Regression Analysis showed that both training and experience with students with disabilities were influencing teacher's use of adaptive instruction formats. Two significant correlations were found between the adaptive instruction domain and the variables of training in special education/inclusion ( $r = .292$ ,  $p = .040$ ), and experience working with students with disabilities ( $r = .364$ ,  $p = .013$ ) (See Table 1).



**Table 1. Variable Correlations: Prediction of Adaptive Instruction**

<b>Pearson Correlation</b>	<b>Crit C (Sig)</b>	<b>Number of students in class</b>	<b>Number of students with disabilities in class</b>	<b>Year of completing initial teacher training</b>	<b>Training in special education / inclusion</b>	<b>Experience working with students with disabilities</b>
<b>CritC (Adaptive Instruction )</b>	<b>1.00</b>	<b>-.16</b>	<b>-.02</b>	<b>.07</b>	<b>.30</b>	<b>.36</b>
<b>Number of students in class</b>	<b>-.16 (.17)</b>	1.00				
<b>Number of students with disabilities in class</b>	<b>-.02 (.47)</b>	-.23	1.00			
<b>Year of completing initial teacher training</b>	<b>.07 (.34)</b>	.21	.17	1.00		
<b>Training in special education / inclusion</b>	<b>.30 (.04)*</b>	-.06	.28	.30	1.00	
<b>Experience working with students with disabilities</b>	<b>.36 (.01)**</b>	-.06	-.06	-.01	.40	1.00
<b>N Crit C</b>	<b>37</b>	<b>37</b>	<b>37</b>	<b>37</b>	<b>37</b>	<b>37</b>

\* P< .05 \*\*P< .01

The regression analysis further showed that the variable of experience working with students with disabilities predicted adaptive instructional practices. The adjusted  $R^2$  of .108,  $F=5.36$ ,  $\text{sig.}=.027$  showed that the variable accounted for 10.8% of the explained variance (See Table 2). Experience with students with disabilities therefore stood out as relevant to providing adaptive teaching practices.

**Table 2.** Regression Model Summary: Background Variables as Predictors of Effective Teaching Practices

Model	R	R Square	Adj. R Square	df	F	Sig.
1	.364	.133	.108	1/35	5.360	.027

a. Predictors: (Constant) Experience with students with disabilities.

### Discussion

The biggest concern that has been raised in relation to instruction in inclusive classrooms is the issue of whether included students will benefit from such instruction. In this study, teachers were found to demonstrate more generic teaching practices and few adaptive teaching practices to meet individual needs of students with disabilities. Teachers with training in special education /inclusion and those with experience working with students with disabilities were found to be using more adaptive teaching practices. These findings are consistent with studies that have found a strong relationship between training in inclusion, experience working with students with disabilities on the one hand, and instructional behaviours in inclusive classrooms on the other hand (Avramidis, et al., 2000; De Bettencourt, 1999; Schumm & Vaughn, 1995; Scott, et al., 1998).

More specifically, the scores on the effective teaching practices measure showed that overall, teachers were making marginal use of individual and group instruction combinations, little by way of adapting curriculum materials for instruction and did not make use of multi-level instructional strategies. Though the literature has highlighted the importance of making instructional adaptations including the use of cooperative learning and peer-tutoring strategies in inclusive classrooms (Mastropieri & Scruggs 2000; Salend, 2001; Scott, et al., 1998), the results of this study showed little evidence of the use of such techniques. This finding confirms those of Baker and Zigmond (1990), McIntosh, Vaughn, Schumm, Haager, and Lee, (1993), and Schumm and Vaughn (1995). Their studies of inclusive classrooms concluded that general education classrooms were dominated by undifferentiated large-group instruction, the tendency to maintain routine rather than meet individual differences and infrequent and unsystematic use of adaptations (Schumm & Vaughn, 1995).

The minimal use of adaptive teaching practices, found in this study, may be attributable to the lack of adequate knowledge and skills (Schumm & Vaughn, 1995). It could also be attributed to teacher unwillingness to use the adaptive instructional strategies, because they are comfortable with generic and non-specific teaching strategies (Ellet, 1993; Johnson & Pugach, 1990), which are unlikely to meet the individual needs of students with disabilities.

Further, class-sizes were extremely large and given the reality that there were no teacher-assistants in the classrooms, coupled with the fact that the peripatetic teachers provided only intermittent assistance to the classroom teachers, making adaptations and individualising instruction were bound to be challenging tasks. Similarly, the general lack

of teaching resources was evident in the schools studied, such that many schools did not even have enough writing desks, textbooks or writing materials. In a situation of this nature, acquiring the needed instructional materials for making adaptations was going to be a difficult undertaking.

The development and employment of I.E.Ps constitute an essential and indispensable media for meeting the unique needs of students with disabilities. It is also a means of maximising the versatile / diverse knowledge and skills of all other professionals. However, it was found in this study, that there were no I.E.Ps for students with disabilities. This finding may not be surprising considering that some studies found limited use of I.E.Ps (Baker & Zigmond, 1995; Espin, Deno, & Albayrak-Kaymak, 1998) even in inclusive school settings where their use was mandatory. In Ghana, the absence of I.E.Ps appears to be the result of lack of policy requiring teachers to design them. The Ministry of Education did not require teachers to design I.E.Ps for students with disabilities, by policy or regulation. Only peripatetic teachers were required to assess and design strategies to meet individual needs. Such monopolisation of responsibility is an inappropriate arrangement; one, which is more likely to deny many students with disabilities appropriate assessments and meaningful, effective instruction.

Interestingly, both the t-tests and zero-order correlations showed that training in special education/ inclusion and having experience working with students with disabilities were significantly correlated to adaptive instruction. Experience working with students with disabilities was most predictive of adaptive instructional practices and, therefore stood out as relevant to providing adaptive teaching practices. This demonstrates the relevance of personal experiences of teachers in fostering their employment of adaptive teaching strategies. It suggests that teachers' efforts in regard to the adaptation of instruction to meet individual needs are more likely to improve as teachers gain more experiences with inclusion (Avramidis, et al., 2000; McLaughlin, 1991). The significant correlation between training and adaptive instruction also suggested that the training received by teachers offered some contribution, albeit, minimal to the use of adaptive instructional practices. Providing teachers with more exposure to students with disabilities during training sessions may thus constitute a positive way of developing their confidence in regard to making adaptations.

Further, there is a need to address the impact of large class-sizes on implementing adaptive instruction. The impact of large class-sizes on implementing adaptive instructional strategies is quite considerable and with class-sizes averaging 40-45 students, much more planning and support will be required in order for classrooms teachers to meet the needs of students with special needs. Admittedly, the problem is likely to endure for a considerable period of time before any effort at reducing class-sizes to levels that would facilitate inclusion takes hold.

In this study, the contribution of the peripatetic teachers to the day-to-day instruction of students with disabilities in the classrooms was intermittent and inadequate, as it appeared impracticable for one peripatetic teacher to adequately support the learning of

between 60-80 students with disabilities in a cluster of 15-25 schools. Perhaps the engagement of teacher-assistants and more peripatetic teachers to provide additional support to classroom teachers would alleviate the potential negative effects of large class-sizes on managing and adapting instruction. Further, policy and procedural changes would need to occur in order to allow for classroom teachers to meaningfully collaborate with the peripatetic teachers in assessing needs, designing I.E.Ps, and prescribing strategies for supporting individual needs of students with disabilities.

This study was designed to examine teacher practices that have the potential to support the learning of students with special needs. It was not designed to measure the relationship between teachers' practices and outcomes for students in inclusive classrooms. Thus, the finding that teachers made limited use of instructional adaptations highlights the general concerns raised about instruction in inclusive settings and lends support to the conclusion that students with disabilities in inclusive classrooms may continue to face the likelihood of not being provided with appropriate and effective instruction (Baker & Zigmond, 1990; Schumm & Vaughn, 1995; Westwood & Graham, 2003).

It equally evokes the debate as to whether such placements offer the best education for many of such students, and casts doubt on the capacity of the inclusive schools in the study and others with similar practices in Ghana to meet the needs of students with disabilities. In deed, providing appropriate instruction is an integral part of the process of meeting individual needs more effectively. However, if the contextual realities of the classrooms in the study, including large class-sizes, limit teachers' capacity to make adaptations, then some students may be better off in special schools, as a way of avoiding the phenomenon of 'dumping'. In this sense, Clark, et al.'s (1999) argument may find basis that the idea of meeting individual needs and at the same time avoiding segregation is not a winning conceptualisation because it constitutes a contradiction in the implementation of inclusion.

In spite of this, the general education classroom environment remains one of the few settings, which can best ensure both access and participation to the general education curriculum. In the case of Ghana, the issue to be resolved is: how achievable is individualization, in a system characterised by large class-sizes, limited teacher knowledge, and few peripatetic teachers?

The issues raised, therefore, call for more effective and structured procedures for addressing individual needs. A policy or regulation requiring either teachers or teams of professionals (Program Support Groups) to design I.E.Ps and assess individual needs would be one of the options towards adequately addressing the individual needs of students with disabilities. The use of program support groups has worked well in the state of Victoria, Australia, and an examination of the model could be useful for Ghana (Department of Education & Training, Victoria) In Ghana, such program support groups could also act as assessment committees and make decisions for implementing inclusion for students with disabilities.

The availability of resources though not tested in this study appeared to play a part in the current functioning of inclusive education programs. There is a need therefore, to

strengthen the resource base of schools in order to provide principals and teachers with needed resources to provide effective learning experiences for students with disabilities. This could be achieved through the provision of teaching resource pools or centres in each district. Alternatively, such resource pools could be incorporated into the existing UNICEF teaching resources project in each school. Further, a general student support funding formula (akin to the system in the Australian State of Victoria (Department of Education & Training, Victoria) could be established to ensure that any student with an IEP or requiring support in the general education classroom is catered for by the allocation of resources to the school global budget.

### **Conclusion**

This study examined the instructional practices of teachers in inclusive classrooms in Ghana. It also assessed the teachers' background variables that were most predictive of adapting instruction to support students with special needs in the inclusive classrooms. The results showed teachers were using more generic teaching practices with limited or no adaptations tailored to the needs of included students. Teachers' experience working with students with disabilities was the background variable most predictive of adaptive teaching.

The study showed that increased teacher exposure to students with disabilities and further professional development would lead to increased teacher capacity to provide more adaptive instructional practices and ensuring that individual needs of students with disabilities are adequately addressed in inclusive classrooms. The Ministry of Education would need to develop policies and programs that would ensure that classroom teachers are adequately supported by peripatetic teachers and reasonable resources to nullify the negative impact of large class-sizes on the capacity of teachers to adapt instruction to individual needs.

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